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September 23, 1997

VIA HAND DELIVERY

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

Re: **MM Docket No. 87-268**

Dear Mr. Caton

Transmitted herewith on behalf of Los Angeles Unified School District, Licensee of Noncommercial Educational Television Station KLCS-TV, Los Angeles, CA, are original and four (4) copies of its Opposition to the Supplemental Filing of Venture Technologies in the above-referenced proceeding.

Very truly yours

Stanley S. Neustadt

Stanley S. Neustadt

Enclosures

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BEFORE THE

Federal Communications Commission

In the Matter of	)	
	)	
Advanced Television Systems	)	
and Their Impact upon the	)	**MM Docket No. 87-268**
Existing Television Broadcast	)	
Service	)	

To: The Commission

OPPOSITION OF LOS ANGELES UNIFIED SCHOOL DISTRICT TO SUPPLEMENTAL FILING OF VENTURE TECHNOLOGIES

Los Angeles Unified School District ("LAUSD"), the licensee of Noncommercial Educational Television Station KLCS-TV, Los Angeles, CA, by its attorneys, respectfully opposes the Supplemental Filing of Venture Technologies ("VenTech") in the above-captioned proceeding, and urges the Commission not to change the allocation table for digital television in the respects proposed. In support of its position, LAUSD states:

1. The interest of LAUSD in this matter is clear. Its station is located in an area of the country which has proved most difficult for allocation purposes. Its current NTSC operation is on Channel 58, and the Commission's proposal is for its DTV operation to be on Channel 41. VenTech proposes that LAUSD utilize Channel 69 for its DTV operation. This is markedly less satisfactory, and, possibly, virtually unusable.

2. Attached hereto is the Engineering Statement of Bernard R. Segal, the consulting engineer for LAUSD. It notes first that, because Channel 69 is not within the core spectrum, LAUSD would ultimately be required to move to another channel within the core spectrum--a clear financial hardship for a publicly supported station. A second grave, if not fatal, flaw in the Channel 69 proposal is that LAUSD would be responsible for eliminating interference to land mobile users in the frequencies above and immediately adjacent to Channel 69. As the attached Engineering Statement demonstrates, it is virtually impossible to do so in any market, such as Los Angeles, where multiple land mobile users utilize those adjacent frequencies. The Engineering Statement also establishes that the severe problem of protecting land mobile users of adjacent frequencies exists with a number of other VenTech proposals. Its plan, as a whole, could not be adopted without seriously jeopardizing the entire Commission proposal.

3. The VenTech proposal claims great advantages over the Commission's proposal, but fails to supply the basic data and interference criteria on which it is based, rendering difficult, if not impossible, any comparison with the Commission's allocations. Of greatest significance, it provides no information on which to base any conclusion about the extent to which it would provide replication of current service, a key component of the Commission's proposal. Any accommodation of the VenTech proposals with the priorities of the Commission would not be possible. It has not presented sufficient data to justify doing once again an entire nationwide

allocation plan, which would surely be required, to protect the interests of LPTV as against those of the television broadcast stations.

Respectfully submitted

LOS ANGELES UNIFIED SCHOOL DISTRICT

By Stanley S. Neustadt

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Its Attorneys

September 23, 1997

Bernard R. Segal, P.E.
Consulting Engineer
Washington, DC

ORIGINAL

ENGINEERING STATEMENT
PREPARED ON BEHALF OF
LOS ANGELES UNIFIED SCHOOL DISTRICT
LOS ANGELES, CALIFORNIA

The instant engineering statement has been prepared on behalf of Los Angeles Unified School District (hereafter, LAUSD), licensee of station KLCS-TV, Los Angeles, California. This statement is in support of an Opposition to the Venture Technologies (hereafter, VenTech) Group's Supplemental Filing Relating to its Petition for Clarification and Partial Reconsideration of the Fifth and Sixth Reports and Orders in MM Docket Number 87-268 (Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service).

The referenced VenTech pleading includes as an Exhibit A, a table of allotments for southern California which it claims "allows for greater spectral efficiency, including protection of Mexican channels, preservation of LPTV stations, no overlap of cochannel NTSC and DTV signals in the crucial signal inducting area north of Los Angeles along the coastline toward Santa Barbara." Also, it is claimed that "it avoids overlap of co-channel DTV and NTSC service

areas, and reduces impact on LPTV stations, translator stations, unused assignments, and Land Mobile stations." No support is provided indicating the spacing and/or interference criteria employed and no quantitative information to support the conclusionary claims are included. No information is furnished that would permit a determination of how well the plan succeeds in providing service replication. Maximum service replication is a fundamental concept for the entire FCC allotment scheme. No means exist for testing the validity of the claimed results.

LAUSD's interest in the VenTech plan stems from the Exhibit A proposed allotment of channel 69 for DTV use at Los Angeles for KLCS-TV. The FCC allotted channel 41. Channel 69 is undesirable for DTV use for at least two important reasons. The first is that channel 69 is not within the core spectrum and its use would ultimately require a second DTV facility construction within the core spectrum. The attendant costs and other related problems associated with a channel switch would severely stress LAUSD's limited resources. The second important reason for not employing channel 69 anywhere within a 176-kilometer radius of the Los Angeles city center is the prohibitive burden

placed on channel 69 licensees to eliminate interference to land mobile users on the immediate adjacent frequencies above channel 69.

While the FCC has elected to not provide a guard band between channel 69 and the adjacent land mobile frequencies, the FCC has made it quite clear that channel 69 licensees are held responsible for eliminating interference to land mobile operations.

Some years ago, the FCC placed the burden of interference elimination to land mobile users on a channel 69 licensee at Atlanta, Georgia, and in the covering document placed all future channel 69 licensees on notice that they would similarly be responsible for the elimination of interference to land mobile users on the immediately adjacent higher frequencies. The land mobile practice within the band is for the use of the upper frequencies for forward message purposes and the use of the lower frequencies for return message purposes, i.e., duplex operation. Thus, there are land mobile receiving frequencies that are close to the relatively high-powered channel 69 transmitting frequency. The

receivers have relatively low threshold levels of sensitivity, making the task of avoiding interference extremely difficult.

For example, if the land mobile receiver sensitivity level is -80 dBm, the D/U interference ratio is -15 dB, and the DTV channel 69 effective radiated power is 55.7 kilowatts or 77.5 dBm (as has been allotted for KLCS-TV DTV by the FCC plan), then the out-of-band emission for the channel 69 station must be attenuated approximately 142.5 dB, i.e., by a factor of about 13,000,000, just beyond the channel 69 band edge to avoid causing interference. This writer is unaware of any technology that can achieve that order of suppression without seriously jeopardizing the within-band performance. It is for this reason that a channel 69 allotment in any major market where a multitude of land mobile users can be expected to be present on the immediately higher adjacent frequencies, must be avoided.

The interference avoidance requirements to land mobile operations that the FCC has imposed for television stations on and adjacent to channels 14, 16 and 20 in Los Angeles are a clue to the severity of the problem. The same

adjacent channel interference mechanism that is appropriate for channels 14, 16 and 20 applies as well to the land mobile frequencies immediately above channel 69. The first adjacent minimum separation requirement of 176 kilometers from the center of Los Angeles set forth in Section 73.623(e) illustrates that, as a practical matter, a channel 69 allotment to Los Angeles is simply untenable.

The use of a physical separation, such as is in place for the protection of land mobile facilities at the locations specified in Section 73.623(e), is an alternate approach to resolving the problem in the absence of a guard band. Thus, while there is no proscription to a channel 69 allotment in a major market community in the FCC rules, the burden of successfully eliminating the interference to land mobile users is so great that, as a practical matter, the FCC has effectively created a guard band, i.e., channel 69, for the protection of land mobile operations without officially doing so.[1]

[1]In this regard, it is only fair to note that the FCC in the Sixth Report and Order allotted DTV channel 69 to Riverside, California, for paired use with NTSC channel 62. The channel 62 site reference is only 52 kilometers from the Los Angeles reference used for land mobile protection purposes on channels 14, 16 and 20. Thus, the FCC allotment of DTV channel 69 at Riverside suffers from the same defect as the VenTech plan.

Aside from the fact that the allotment of channel 69 for DTV use at Los Angeles is impractical because of the land mobile interference problem, there are yet other facets of the VenTech plan which demonstrate that it does not comport with FCC criteria and, therefore, should not be considered.

A cursory review of the Exhibit A allotment proposal reveals that some of the claimed attributes of the proffered plan are not satisfied when FCC criteria for establishing the Table of Allotments in the Sixth Report and Order are employed.

One of the important concerns in the FCC's allotment scheme was to provide for the protection of land mobile users in various major metropolitan areas. As indicated earlier, in Los Angeles, channels 14, 16 and 20 are designated for land mobile use. The VenTech plan proposes the allotment of DTV channel 17 to San Bernardino to be paired with first adjacent NTSC channel 18 with the transmitter at Sunset Ridge. The FCC plan is for DTV channel 61 to be paired with NTSC channel 18. The FCC has mandated minimum cochannel and adjacent channel separations to protect land mobile

operations. The Los Angeles reference site for determining compliance with the cochannel and first adjacent channel separation requirements is at geographic coordinates: 34° 03′ 15″ North Latitude, 118° 14′ 28″ West Longitude (see Section 73.623(e)[2]). The San Bernardino channel 18 site reference is at geographic coordinates 34° 11′ 15″ North Latitude, 117° 41′ 54″ West Longitude. The separation to the Los Angeles channel 16 land mobile reference is 52.2 kilometers. The required minimum first adjacent channel separation prescribed by Section 73.623(e) of the Rules is 176 kilometers. Hence, a severe short spacing to the land mobile users on channel 16 in Los Angeles is proposed.

Another similar short spacing example in the VenTech Exhibit A plan is that for the proposal to allot DTV channel 21 for paired use with Los Angeles NTSC channel 22. Station KWHY-TV operates on channel 22. The FCC's Sixth Report and Order allotted DTV channel 42 for paired use with channel 22. The transmitter site for KWHY-TV on channel 22 at Mt. Wilson bears the geographic coordinates: 34° 13′ 36″ North Latitude, 118° 03′ 59″ West Longitude. That site

[2]Section 73.623(e) was corrected to include channel 16 at Los Angeles by an Erratum released May 9, 1997.

is only 25 kilometers from the land mobile channel 20 reference in Los Angeles. The proposed allotment is short spaced 151 kilometers.

Two obvious additional first adjacent channel short spacings with respect to the Los Angeles land mobile reference occur at Santa Barbara where the Exhibit A plan calls for the allotment of DTV channel 15 for paired use with NTSC channel 38 and DTV channel 19 for paired use with NTSC channel 3. The FCC plan for Santa Barbara is for the allotment of DTV channels 26 and 27. Channel 26 is unpaired with an NTSC allotment and channel 27 is paired with NTSC channel 3. It is believed the channel 26 DTV allotment was intended to be paired with channel 38, but irrespective of the channel pairings, the important point is that the channel 3 reference site which would be used for channel 19, i.e., 34° 31′ 32″ North Latitude, 119° 57′ 28″ West Longitude, is only 166.5 kilometers from the land mobile channel 20 reference in Los Angeles and the reference for DTV channel 26, which presumably is paired with NTSC channel 38, i.e., 34° 25′ 18″ North Latitude, 119° 41′ 55″ West Longitude, is only 140.3 kilometers from the land mobile reference on first adjacent channel 16 at Los Angeles. Thus, both the channel 15 and channel 19 proposed Santa Barbara

DTV allotments are short spaced to the Los Angeles land mobile reference for channels 16 and 20.

The foregoing shows at least four allotments which fail to comply with the spacing criteria for the avoidance of interference with land mobile operations in Los Angeles.

The proffered VenTech Appendix A provides no indication of the underlying criteria used to establish the proposed DTV allotments for the communities of Tijuana and Tecate in Baja California, Mexico. A detailed review of the VenTech plan has not been made by the undersigned, but it is quite clear that many of the allotments shown are short spaced under the terms of the present agreement between the United States and Mexico, and, also, with the terms of the Memorandum of Understanding (MOU) between the Federal Communications Commission and its counterpart Mexican agency relating to the use of the VHF and UHF bands for digital television broadcasting along the common border.

Many of the proposed Tijuana DTV allotments are cochannel to NTSC allotments at Los Angeles. For example, Tijuana DTV channel 22 is cochannel to Los Angeles NTSC channel 22; Tijuana DTV channel 34 is cochannel to Los Angeles NTSC channel 34; and Tijuana DTV channel 58 is cochannel to Los Angeles NTSC channel 58. The reverse situation prevails, also, in the plan; Tijuana NTSC channel 33 is cochannel to Los Angeles DTV channel 33, and Tijuana NTSC channel 21 is cochannel to Los Angeles DTV channel 21. The mentioned separations are in the order of 215 kilometers and the required minimum cochannel separation under the terms of the U.S.-Mexican Agreement is 280 kilometers. The MOU countenances a DTV-to-NTSC UHF cochannel minimum separation of 244 kilometers. The FCC allotment table, as far as this writer has been able to determine, comports with the MOU separations. VenTech provides no basis or support for the many NTSC-DTV cochannel U.S.-Mexican allotment short spacings that it proposes. On that point alone, the VenTech proposal fails.

No demonstration is furnished of how the plan succeeds or does not succeed in providing service replication in comparison to the FCC's allotment

scheme. Actually, the plan is devoid of any information that would permit a rational comparison of benefits *vis-a-vis* the FCC's plan.

Because of the defect in allotting channel 69 for DTV use at Los Angeles, the demonstrated failure of the plan to fulfill basic allotment separation criteria, the failure of the plan to comport with at least the terms of the MOU, and the failure of the plan to provide the extent of service replication for individual stations, it cannot be given any credence.

Bernard R. Segal, P.E.

September 22, 1997

CERTIFICATE OF SERVICE

I, Maryam B. Jeffrey, do hereby certify that a true and correct copies of the foregoing OPPOSITION OF LOS ANGELES UNIFIED SCHOOL DISTRICT TO SUPPLEMENTAL FILING OF VENTURE TECHNOLOGIES were mailed, first-class postage prepaid, this 23rd day of September, 1997 to the following:

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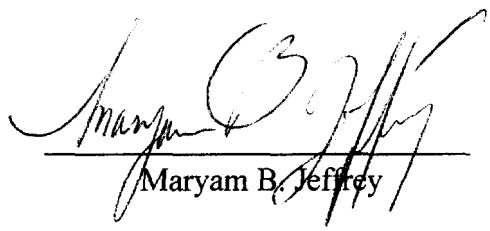

Maryam B. Jeffrey

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